Amendments to the Claims

Claim 1 (currently amended): A surface-modified base matrix, ~~which is comprised of~~ comprising a porous polymeric base matrix onto which branched hydrophilic polyhydroxy-functional polymers have been covalently attached, ~~characterised in that~~ wherein the polyhydroxy-functional polymers ~~are~~ include hyperbranched polymers ~~that present~~ having a degree of branching (DB) of at least 0.2 and ~~that~~ further wherein each polymer has been tethered to the base matrix at two or more points.

Claim 2 (currently amended): ~~A matrix according to~~ The matrix of claim 1, wherein the polymeric base matrix ~~presents~~ present a hydrophilic polyhydroxy-functional pore surface.

Claim 3 (currently amended): ~~A matrix according to~~ The matrix of claim 1 ~~or 2~~, wherein the polymeric base matrix ~~is comprised of~~ includes a cross-linked carbohydrate material.

Claim 4 (currently amended): ~~A matrix according to~~ The matrix of claim 1 ~~or 2~~, wherein the polymeric base matrix is comprised of one or more synthetic polymers.

Claim 5 (currently amended): ~~A matrix according to any one of the preceding claims,~~ The matrix of claim 1, wherein the degree of branching of the polyhydroxy-functional polymers is at least about 0.4~~, preferably at least 0.6~~.

Claim 6 (currently amended): ~~A matrix according to any one of the preceding claims,~~ The matrix of claim 1, wherein the hyperbranched hydrophilic polymer is a copolymer comprising a polyhydroxy-functional monomer cross-linked with an epoxide.

Claim 7 (currently amended): ~~A matrix according to~~ The matrix of claim 6, wherein the epoxide is epichlorohydrin.

Claim 8 (currently amended): ~~A matrix according to any one of the preceding claims,~~ The matrix of claim 1, wherein the polyhydroxy-functional monomer is a polyol.

Claim 9 (currently amended): ~~A matrix according to~~ The matrix of claim 8, wherein the polyol is a sugar or a sugar alcohol.

Claim 10 (currently amended): ~~A matrix according to~~ The matrix of claim 9, wherein the polyhydroxy-functional monomer is selected from the group ~~that consists~~ consisting of sucrose, glucose, sorbitol, mannitol and xylitol.

Claim 11 (currently amended): ~~A matrix according to~~ The matrix of claim 10, wherein the polyhydroxy-functional monomer is sucrose.

Claim 12 (currently amended): ~~A matrix according to any one of the preceding claims,~~ The matrix of claim 1, which has been derivatised into a chromatographic matrix by attachment of functional groups to one or more of the hydroxy groups of the polymer.

Claim 13 (currently amended): ~~A matrix according to~~ The matrix of claim 12, which is an ion-exchanger, and wherein said functional groups are charged groups ~~capable of~~ adapted to binding substances ~~of the~~ having an opposite charge.

Claim 14 (currently amended): ~~A matrix according to~~ The matrix of claim 13, which has been derivatised into a cation-exchanger by attachment of sulfopropyl groups to one or more of the hydroxy groups of the polymer.

Claim 15 (currently amended): ~~A matrix according to~~ The matrix of claim 13, which has been derivatised into a anion-exchanger by attachment of quaternary amino groups to one or more of the hydroxy groups of the polymer.

Claim 16 (currently amended): ~~A matrix according to~~ The matrix of claim 12, ~~wherein the~~ wherein said functional groups are selected from the group ~~that consists~~ consisting of affinity groups, hydrophobic groups and metal chelating groups.

Claim 17 (cancelled)

Claim 18 (currently amended): A method of surface-modification of a porous base matrix, ~~which comprises~~ comprising the steps of:

(a) providing a porous polymeric base matrix that ~~comprises~~ includes functional hydroxy groups;

(b) activating the functional hydroxy groups on the base matrix by nucleophilic substitution;

(c) providing a hydrophilic branched hydroxy-functional polymer; and

(d) contacting the activated base matrix with said polymer under conditions allowing covalent coupling of the hydrophilic polymer to the base matrix,

wherein the polyhydroxy-functional polymer is a hyperbranched polymer that presents a degree of branching (DB) of at least about 0.2.

Claim 19 (currently amended): ~~A method according to~~ The method of claim 18, wherein the porous base matrix provided in step (a) is a cross-linked carbohydrate~~, such as agarose~~.

Claim 20 (currently amended): ~~A method according to~~ The method of claim 18 ~~or 19~~, wherein the porosity of the base matrix provided in step (a) is at least about 90%~~, such as at least about 94%~~.

Claim 21 (currently amended): ~~A method according to any one of claims 18-20,~~ The method of claim 18, wherein an epoxide reagent is added in step (b).

Claim 22 (currently amended): ~~A method according to any one of claims 18-21,~~ The method of claim 18, wherein the hydrophilic hyperbranched hydroxyfunctional polymer is provided by polymerisation of a polyhydroxy-functional monomer with epichlorohydrin.

Claim 23 (currently amended): ~~A method according to any one of claims 18-22,~~ The method of claim 18, wherein the polyhydroxy-functional monomer is a polyol, such as a sugar or a sugar alcohol.

Claim 24 (currently amended): ~~A method according to~~ The method of claim 23, wherein the polyhydroxy-functional monomer is selected from the group ~~that consists~~ consisting of sucrose, glucose, sorbitol, mannitol and xylitol~~, preferably sucrose~~.

Claim 25 (currently amended): ~~A method according to any one of claims 18-24,~~ The method of claim 18, wherein step (d) is performed under alkaline conditions.

Claim 26 (currently amended): ~~A method according to any one of claims 18-25,~~ The method of claim 18, wherein the degree of branching of the hyperbranched hydrophilic polymer is at least about 0.4~~, preferably at least about 0.6~~.

Claim 27 (currently amended): A method of producing an ion-exchange matrix, which method comprises to modify the surface of ~~a~~ the porous polymeric base matrix ~~according to any one of claims 18-26~~ of claim 18 and an additional step of derivatisation of one or more of the hydroxy groups present on the modified surface with functional groups.

Claim 28 (currently amended): ~~A method according to~~ The method of claim 27, wherein said functional groups are selected from the group ~~that consists~~ consisting of ion exchange groups, affinity groups, hydrophobic groups and metal chelating groups.

Claim 29 (currently amended): ~~Use of a matrix according to any one of claims 1-16~~ The use of the matrix of claim 1 in chromatography.